



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/574,144

03/29/2006

Dirkjan B. Van Dam

GB 030179

3758

24737

7590

03/18/2009

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

BLEVINS, JERRY M

ART UNIT

PAPER NUMBER

2883

MAIL DATE

DELIVERY MODE

03/18/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,144	<b>Applicant(s)</b> VAN DAM ET AL.	
	<b>Examiner</b> JERRY BLEVINS	<b>Art Unit</b> 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 41-47 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-40 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8, 10, 12, 14, 15, 19, 21-26, 28-31, 33, 34, 48 and 49 is/are rejected.
- 7) ☒ Claim(s) 5, 9, 11, 13, 16-18, 20, 27, 32, 35-37, 50 and 51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 41-47 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 29, 2008.

Applicant's election without traverse of Group I in the reply filed on October 29, 2008 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-8, 10, 12, 14, 15, 19, 21-26, 28-31, 33, 48, and 49 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2002/0135727 to Nakaminami et al.

Regarding claim 1, Nakaminami teaches a device comprising first (20) and second (22) layers wherein: the first layer is flexible (paragraph 49); and the second layer is substantially flat and meanders across the plane of the first layer (as in Figure 2) so as to prevent fracture of the second layer when the first layer is deformed (paragraphs 77, 95, 119, 128, 152, 154, 171).

Regarding claim 2, Nakaminami teaches that the second layer is in contact with the first layer over substantially the whole of the length of the second layer (as in Figure 2).

Regarding claim 3, Nakaminami teaches that the second layer comprises a plurality of interconnected portions (Figure 9, elements 22a).

Regarding claim 4, Nakaminami teaches that the portions are arranged in aligned sets, the portions being connected to one another so as to provide a continuous path between first and second ends of the second layer (Figure 9).

Regarding claim 6, Nakaminami teaches that the portions are connected to one another by a connecting element (43) that is narrower than the portions being connected.

Regarding claim 7, Nakaminami teaches that the portions are aligned in a longitudinal direction and the connecting element is disposed to be substantially perpendicular to said direction (Figure 9).

Regarding claim 8, Nakaminami teaches that the interconnected portions comprise rectangular portions (Figure 9).

Regarding claim 10, Nakaminami teaches two aligned sets of interconnected portions (Figure 9).

Regarding claim 12, Nakaminami teaches that the interconnected portions comprise substantially quadrilateral portions (Figure 9).

Regarding claim 14, Nakaminami teaches that the interconnected portions are arranged in an array of interconnected portions (Figure 9).

Regarding claim 15, Nakaminami teaches that at least one of said interconnected portions is connected to three or more other portions (Figure 9).

Regarding claim 19, Nakaminami teaches that the first layer is a substrate (Figures 2, 3, 5, 7, 8).

Regarding claim 21, Nakaminami teaches that the second layer is a coating on the first layer (Figures 2, 3, 5, 7, 8).

Regarding claim 22, Nakaminami teaches that the second layer comprises a transparent conductor (paragraph 58).

Regarding claim 23, Nakaminami teaches that the second layer comprises a conductive oxide (paragraph 58).

Regarding claim 24, Nakaminami teaches that the conductive oxide comprises indium tin oxide (paragraph 58).

Regarding claim 25, Nakaminami teaches that the portions are interconnected to provide a continuous path for an electric current (paragraph 102).

Regarding claim 26, Nakaminami teaches a third layer (23) covering a portion of said the second layer.

Regarding claim 28, Nakaminami teaches a display (paragraphs 3, 11, 12).

Regarding claim 29, Nakaminami teaches an electroluminescent display (paragraphs 3, 11, 12).

Regarding claim 30, Nakaminami teaches a foil display (paragraphs 3, 11, 12).

Regarding claim 31, Nakaminami teaches a liquid crystal display device (paragraphs 3, 11, 12).

Regarding claim 33, Nakaminami teaches that the liquid crystal display device comprises an active matrix device (as in paragraph 54).

Regarding claim 48, Nakaminami teaches a device comprising a layer (22) on a flexible (paragraph 49) substrate (20), the layer comprising a plurality of interconnected conductive portions (22a, Figure 9), each portion being multiply connected to one or more other conductive portions so as to form a meandering conductive path across the substrate (Figure 9), whereby fracture of the layer when the substrate is deformed is avoided (paragraphs 77, 95, 119, 128, 152, 154, 171).

Regarding claim 49, Nakaminami teaches that the interconnected conductive portions are substantially hexagonal or substantially quadrilateral (Figure 9).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaminami in view of US 2004/0135951 to Stumbo et al.

Regarding claim 34, Nakaminami teaches the limitations of the base claim 31. Nakaminami does not teach a passive matrix device. Stumbo teaches a passive matrix liquid crystal display device (paragraph 5). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the liquid crystal display device of Nakaminami with the passive matrix device of Stumbo. The motivation would have been to simplify the electronics (paragraph 5).

*Allowable Subject Matter*

Claims 5, 9, 11, 13, 16-18, 20, 27, 32, 35-37, 50, and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 38-40 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 5, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious that the aligned sets are offset from one another.

Regarding claim 9, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious that the portions are connected to one another at their respective ends.

Regarding claim 11, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious that the interconnected portions comprise semi-circular portions.

Regarding claim 13, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious that the interconnected portions comprise substantially hexagonal portions.

Regarding claim 16, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious that the second layer comprises a random arrangement of portions.

Regarding claims 17, 18, 38-40, 50, and 51, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious that each of the portions has a length, the portion length being selected to prevent fracture when the first layer is deformed.

Regarding claim 20, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious that the first layer comprises polycarbonate.

Regarding claim 27, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious that the third layer is Poly-3,4-Ethylenedioxythiophene.

Regarding claim 32, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious that each of the portions has a length, the portion length being dependent on the spacing and size of pixels in the liquid crystal display device.

Regarding claims 35 and 36, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious a plurality of spaced apart pixels, the second layer comprising an electrode which is arranged to meander periodically between the pixels, the period of the meander being dependent on the pixel spacing.

Regarding claim 37, Nakaminami, alone or in combination with the prior art, fails to disclose or render obvious that the second layer comprises a brittle material.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY BLEVINS whose telephone number is (571)272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jerry M Blevins/  
Patent Examiner, Art Unit 2883

/Frank G Font/  
Supervisory Patent Examiner, Art Unit 2883

FGF/jmb  
03/11/2009